APPLICATION PROFILING USING STRUCTURAL METADATA DESCRIPTION FOR NETWORK-INDEPENDENT AUTOMATIC PARTITIONING AND DISTRIBUTION

ABSTRACT OF THE INVENTION

An instrumentation system profiles an application using structural metadata description of the application. Units of the application have strongly-typed, binary-standard interfaces, and are profiled without access or reference to application source code. A structural metadata description of the application includes compiled, interface-level type information used to identify and measure interaction between units of the application. Profiling of the application results in an application profile that includes description of the static relationships and/or dynamic interactions between units of the application. The application profile is combined with a network profile that describes a distributed computing environment. Analysis of the result yields a distribution plan for units of the application in a distributed computing environment. During execution, units of the application are distributed through the distributed computing environment according to the distribution plan.

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